Attorney Docket No.: 01CON346P Serial No.: 09/761,033

## **List of Claims:**

## Claims 1-27 (cancelled)

Claim 28 (previously presented): A method of encoding a speech signal, said method comprising:

processing said speech signal to generate a plurality of frames, wherein each of said plurality frames includes a plurality of subframes;

coding a previous subframe of said plurality of subframes using Code-Excited Linear Prediction to generate a previous excitation signal; and

applying short term enhancement using said previous excitation signal to enhance a current excitation signal for a current subframe.

Claim 29 (previously presented): The method of claim 28, wherein said short term enhancement is achieved by using several pulses from said previous excitation signal to generate one or more short term enhancement pulses based on short term correlation.

## Claim 30 (cancelled)

Claim 31 (previously presented): The method of claim 28, wherein said short term enhancement is achieved by weighting said previous excitation signal by a current weighting filter to estimate correlation peaks at a distance.

Claim 32 (previously presented): The method of claim 31, wherein said short term enhancement determines less than five peaks and gains per each sub-frame from said previous excitation signal.

Claim 33 (previously presented): The method of claim 31, wherein said current excitation signal pattern is constructed using  $P(n) = C \sum_{i} Gi \cdot \delta(n-Ti) + \delta(n)$ , where Gi is a

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gain, Ti is a distance for an ith peak, and C is a coefficient, wherein Ti is smaller than pitch

period.

Claim 34 (previously presented): The method of claim 33, wherein gains and distances

are calculated by maximizing correlations of previous excitation signals in a weighted speech

domain.

Claim 35 (previously presented): The method of claim 33, wherein short term enhanced

excitation is generated by performing a convolution operation of P(n) with said excitation signal.

Claims 36-37 (cancelled)

Claim 38 (previously presented): An encoder for encoding a speech signal, said encoder

comprising:

a speech processing circuitry configured to process said speech signal to generate a

plurality of frames, wherein each of said plurality frames includes a plurality of subframes;

a coding circuitry configured to code a previous subframe of said plurality of subframes

using Code-Excited Linear Prediction to generate a previous excitation signal; and

a short term enhancement circuitry configured to apply short term enhancement using

said previous excitation signal to enhance a current excitation signal for a current subframe.

Claim 39 (previously presented): The encoder of claim 38, wherein said short term

enhancement is achieved by using several pulses from said previous excitation signal to generate

one or more short term enhancement pulses based on short term correlation.

Claim 40 (cancelled)

Claim 41 (previously presented): The encoder of claim 38, wherein said short term

enhancement is achieved by weighting said previous excitation signal by a current weighting

filter to estimate correlation peaks at a distance.

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Claim 42 (previously presented): The encoder of claim 41, wherein said short term

enhancement determines less than five peaks and gains per each sub-frame from said previous

excitation signal.

Claim 43 (previously presented): The encoder of claim 41, wherein said current

excitation signal pattern is constructed using  $P(n) = C \sum_{i} Gi \cdot \delta(n - Ti) + \delta(n)$ , where Gi is a

gain, Ti is a distance for an ith peak, and C is a coefficient, wherein Ti is smaller than pitch

period.

Claim 44 (previously presented): The encoder of claim 43, wherein gains and distances

are calculated by maximizing correlations of previous excitation signals in a weighted speech

domain.

Claim 45 (previously presented): The encoder of claim 43, wherein short term

enhanced excitation signal is generated by performing a convolution operation of P(n) with said

excitation signal.

Claims 46-47 (cancelled)

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